F-18-e. Policy: Educational programs in the parkway can and should be conducted by a variety of organizations. These can include:

- public, parochial, and private educational institutions.
- history, art, mining, and environmental groups.
- park and recreational organizations.
- resource management agencies.
- the conservancy and its member agencies/organizations; in addition to having its own programs, the conservancy should seek cooperative relationships with the other organizations to maximize the variety and amount of educational programs using the parkway.

G. RESOURCE CONSERVATION ELEMENT

Challenges

The California Government Code requires that general plans address the conservation of natural resources and energy. The 2025 General Plan Resource Conservation Element is important because long-term development potential of Fresno depends heavily on the quality, quantity, and cost-effective availability of resources (such as water and energy) to support the expected population growth and development. Resource management also has major implications for public health and safety, and resources are intrinsic to maintaining the city's aesthetics, heritage, and its overall attractiveness. Collectively, these issues are perceived as "quality of life" and are major determinants of industries' and individuals' willingness to locate in and invest in the community. For these reasons, a strong commitment to resource protection is needed for Fresno's long-term economic stability and preservation of its property values.

Direction

This section of the Plan Elements chapter of the general plan constitutes the Natural Resource Conservation Element (and includes the Energy Conservation Element). It addresses the following topic areas:

1. **Air Quality.** Fresno lies in the San Joaquin Valley Air Basin, a region with climate and topography that is predisposed to poor air quality. This region has had longstanding air quality problems and has chronically failed to attain national and state clean air standards for ozone (oxidants) and particulate matter (PM_{10}). The Fresno [-Clovis] Urbanized Area has also had intermittent, localized exceedances of carbon monoxide (CO) standards. Air quality must be improved and protected to assure that our atmosphere is clean and healthful, and to avoid sanctions for non-attainment. This Resource Conservation Element addresses issues not covered by other general plan elements (Regional Cooperation, Urban Form, Public Facilities, Open Space/Recreation) which provide direction on clean air-oriented land use, infrastructure development, and alternative transportation.

2. **Water Resources.** The Fresno area needs adequate quantities of water suitable for human consumption, recreation, and agriculture. In conjunction with the Metropolitan Water Resources Management Plan and the 2025 General Plan Regional Cooperation and Public Facilities Elements, this Resource Conservation Element provides policy direction toward assuring that these needs will be met in the long term.

3. **Agricultural Land.** California's Central Valley is one of the world's premier growing regions, and the economy of this area is based primarily on agriculture. The 2025 General Plan contains major policy direction aimed at protecting the Fresno area's valuable productive agricultural land from premature and inappropriate development. Basic direction is given in the Regional Cooperation and Urban Form Elements; this Resource Conservation Element addresses other aspects of the issue.

4. **Mineral Resources.** This section of the Resource Conservation Element (in conjunction with the Urban Form Element) is intended to assure that cost-effective locally available mineral resources (such as rock, gravel, and sand for concrete aggregate) are protected for future use by the construction industry, and that extraction of these resources is done in a responsible manner that provides for beneficial end uses of surface mining sites, as required by the California Public Resources Code (the Surface Mining and Reclamation Act). The 2025 General Plan update is being prepared after the State-mandated periodic update of the city's mineral resource policies, requiring that a more detailed background explanation precede these Resource Conservation Element objectives and policies.

5. **Energy Conservation.** In conjunction with the Urban Form and Public Facilities Elements, this section of the 2025 General Plan provides direction to reduce dependence on costly, nonrenewable sources of energy by maximizing energy-efficiency and the use of renewable, low-impact energy sources such as solar.

6. **Historic Resources.** Historic preservation helps a community retain physical links to significant architecture, persons, events, and landscapes from past time periods. As Fresno moves into the next century and intensifies its land uses, there will be development pressure on older sections of the city. This section of the Resource Conservation Element provides policy direction to protect, and to continue appropriate use of, Fresno's historic resources. Structures of architectural quality and locations of cultural significance (including prehistoric sites, structures, and neighborhoods/districts) are to be preserved through identification, listing on Historic Registers, monitoring, maintenance, and safeguarding of their settings.

7. **Native Plants and Wildlife.** Central California is a unique biological enclave, with a rich diversity of flora and fauna. The region's climate, soils, hydrology, and geographic isolation fostered resident species found nowhere else on earth and significant populations of more widely distributed species. Through agricultural, rural residential, and urban development, these species and their habitats are being diminished and marginalized. Native plants and wildlife should be protected to preserve ecological balance in the region, to help forestall or prevent further establishment of harmful exotic weeds and pests, to preserve their unique genetic capabilities, and to provide wildlife viewing and related recreational opportunities. In conjunction with the Urban Form and Open Space/Recreation Elements, and the Mineral Resources section of this Resource Conservation Element, this section of the 2025 General Plan provides policy direction to safeguard areas where these species can be preserved and enhanced.

Relationship to General Plan Goals

The importance of resource conservation is evident in the number of 2025 General Plan Goals which directly and indirectly deal with resource conservation:

Goal 1: Enhance the quality of life for the citizens of Fresno and plan for the projected population within the moderately expanded Fresno urban boundary in a manner which will respect physical, environmental, fiscal, economic, and social issues.

Goal 3: Preserve and revitalize neighborhoods, the downtown, and historic resources.

Goal 6: Coordinate land uses and circulation systems to promote a viable and integrated multi-modal transportation network.

Goal 7: Manage growth to balance Fresno's urban form while providing an adequate public service delivery system which is fairly and equitably financed.

Goal 10: Provide quality open space, park and recreation facilities and programs to support the projected population.

Goal 11: Protect, preserve, and enhance significant biological, archaeological, and paleontological resources and critical natural resources including, but not limited to, air, water, agricultural soils, mineral, plant, and wildlife resources.

Goal 12: Develop urban design strategies to improve Fresno's visual image and enhance its form and function.

Goal 14: Protect and improve public health and safety.

Goal 16: Work cooperatively with the local agricultural industry to conserve prime farmland and respect its importance as Fresno County's base economic resource.

Air Quality

G-1. OBJECTIVE: In cooperation with other jurisdictions and agencies in the San Joaquin Valley Air Basin, take necessary actions to achieve and maintain compliance with state and federal air quality standards.

G-1-a. Policy: Support and encourage regional, state and federal programs and actions for the improvement of air quality.

G-1-b. Policy: As affirmed by Resolution of the City Council on April 9, 2002, implement the list of Reasonably Available Control Measures (RACM) submitted by the San Joaquin Valley Air Pollution Control District (SJVAPCD) to the Environmental Protection Agency as part of the Ozone Attainment Plan designed to reduce ozone forming emissions from operations and/or services the city controls.

G-1-c. Policy: Preserve reasonable compatibility between Federal/State Air Quality Attainment and Maintenance Plans and the Fresno General Plan and its resulting urban development.

- Develop and incorporate air quality maintenance considerations in the preparation and review of land use plans and development proposals.
- Maintain internal consistency within the general plan between policies and programs for air quality resource conservation and the policies and programs of other general plan elements.
- Utilize appropriate computer models (software recommended by San Joaquin Valley Air Pollution Control District or other air quality agencies) to evaluate air quality impacts of projects that require environmental review by the City of Fresno.
- Information regarding land use plans, development projects, and amendments to development regulations will continue to be routed to the San Joaquin Valley Air Pollution Control District for that agency's review and comment on potential air quality impacts.

G-1-d. Policy: Continue to implement broad scale general plan strategies to decrease the generation of air pollution through the reduction of vehicle miles traveled, excessive vehicle traffic congestion and excessive engine idling by implementation of public transportation and other alternatives to private automobile travel.

G-1-e. Policy: Maintain the following general plan land use policies and supportive city regulations:

- multi-use activity center and high-intensity transportation corridor concepts that locate the most intensive commercial and employment activities so that they are proximal to higher density residential areas or are readily accessible from main transportation routes.
- contiguous urban expansion through implementation of the city's Urban Growth Management program and by agreements with the county that control or preclude urban development outside incorporated boundaries.
- infill and appropriately intensified development within the center city and other appropriate locations near transportation routes to reduce peripheral urban development. This is encouraged through plans and policies that endorse more intensive land uses and use of incentives such as those available in redevelopment areas and the Fresno Enterprise Zone, Community Development Block Grant (CDBG) funding for public improvements, and development fee or public improvement cost reductions through linkage fees paid by development located on the urban boundary.
- mixed land use development guidelines that provide more pedestrian-oriented neighborhoods by siting commercial, light industrial, institutional (school, church) and office uses within residential areas.

The city's Local Planning and Procedures Ordinance allows for special permits and master-planned developments which integrate compatible mixed uses, however, a comprehensive revision of the Zoning Ordinance is appropriate to facilitate more innovative development concepts.

- density transfer provides for the reallocation of dwelling units within specified areas where transportation and other infrastructure can support increased densities.
- subdivision and other residential development designs which facilitate pedestrian access to bus stops and other transportation routes.
- maintain and improve transit-related requirements for development, including on-site bus parking and loading lanes with passenger and driver facilities at major shopping centers and other high-traffic locations.
- expand programs to reduce traffic congestion and improve traffic flow. Particular effort should be placed on further improvement of traffic signalization to reduce stop-and-go traffic, which causes excess vehicle emissions from excessive idling. This program requires various strategies and equipment, including optimized signal timing, interconnected signals, traffic-actuated signals, computer based controls, channelized intersections, and additional turn lanes.
- complete the city's network of alternative bicycle and pedestrian transportation routes: the Master Trail system's pedestrian and bikeway components, bicycle lanes on streets, and ancillary safety and convenience facilities to encourage use of these alternative modes of transport.
- provide for additional landscaping which helps maintain and improve air quality, by continuing to increase the extent of landscaped areas in the city using street trees, parking lot shading, median islands, and landscape buffers.

G-1-f. Policy: Maintain the city's construction standards that require cleaner burning wood heaters.

G-1-g. Policy: Support and encourage employer implementation of staggered work hours and employee incentives to use carpools, public transit and other measures to reduce vehicular use and traffic congestion.

G-1-h. Policy: Support efforts to enforce vehicle registration requirements and compliance with vehicle emission standards.

G-1-i. Policy: Encourage development proponents to offset or mitigate project air pollution emissions by buying and removing older, higher-polluting vehicles from service.

G-1-j. Policy: Control and reduce air pollution emissions from city operations and facilities. The city Department of Administrative Services Fleet and General Services Divisions will undertake the following:

- continue to explore the potential for using alternative fueled vehicles in city fleets.
- preventive maintenance schedules that will ensure efficient engine operation.
- air conditioning recycling and charging stations at vehicle maintenance facilities, to reduce Freon gases being released into the atmosphere. Electrostatic filtering systems in city maintenance shops, when feasible or when required by health regulations.
- satellite corporation yards for decentralized storage and vehicle maintenance, if cost-effective and demonstrated to reduce vehicle miles traveled.
- conversion of city-owned emergency backup generators to natural gas fuels whenever this would be safe, cost-effective, feasible, and dependable.

G-1-k. Policy: Continue efforts to improve Fresno Area Express technical performance, emission levels, and system operations, through such measures as:

- select and maintain bus engines, transmissions, fuels, and air conditioning equipment for efficiency and low air pollution emissions.
- site new transit centers and other multi-modal transportation transfer facilities to maximize utilization of mass transit.
- continue efforts to improve on-time performance, increase frequency of service, extend hours of operation, add express bus service, and align routes to capture as much new ridership as possible.
- initiate a program to allow employers and institutions (e.g., educational facilities) to purchase blocks of bus passes at a reduced rate to facilitate their incentive programs for reducing single-passenger vehicle use.

G-1-l. Policy: Airport operations shall be reviewed for opportunities to improve and maintain air quality. Such measures as the following shall be explored:

- mowing or spraying herbicide on weeds in unpaved airfield areas (rather than disking them) to reduce dust.
- limiting the use of Fresno Air Terminal's aircraft burn safety drill pit to training for on-airport safety agencies.
- encouraging aircraft operators to use flight training simulators as a substitute for training flights in actual aircraft, whenever possible.
- increasing the city's role in monitoring airport tenant compliance with regulations for vapor recovery systems and other fueling/defueling operations.

- establishing a procedure to open additional exit booths when the number of vehicles waiting to exit airport parking lots exceeds a specified amount of stacking.

G-1-m. Policy: The Public Works Department shall continue to play a pivotal role in air quality improvement through such measures as:

- continued implementation of bikeway, bikepath, and pedestrian trail plans.
- continued pursuit of grade separations where railroads intersect with city streets.
- continued pursuit of adequate funding for computer-controlled, synchronized traffic signal systems.
- reduction and prevention of entrained dust by routine wet street sweeping, hardscaping of curb/gutter and road shoulder areas, and elimination of unpaved parking lots.

G-1-n. Policy: The Department of Public Utilities shall continue to pursue opportunities to reduce air pollution by using methane gas from the old city landfill, and continuing to use methane from the city's wastewater treatment process, to fuel cogeneration.

G-1-o. Policy: Whenever feasible, the Police Department shall reduce air pollution through such measures as:

- placement and use of police dressing stations within or near field personnel work areas.
- use of existing community facilities as walk-in crime prevention centers.
- expansion of public services at dressing stations and/or community walk-in facilities--for example, making it possible to file police reports or obtain copies of police reports at these satellite sites.
- handling certain types of calls for police service and records requests by telephone.
- police vehicle fleet management program to increase efficiency in the use of vehicles.
- bicycling and walking police beats in some areas.

G-1-p. Policy: Evaluate and pursue long-range transportation measures that are determined to be effective in reducing air pollution, including the following:

- development of express bus corridors on principal transit routes and light rail service in railroad rights-of-way that are proposed for abandonment in the city.

- determine feasibility and pursue implementation of a mass-transit corridor utilizing a fixed or automatic guideway system or other suitable state-of-the-art people-mover technology to support the planned high residential densities and intensive uses in the city's Mid-Rise/High- Rise Corridor along Freeway 41, extending from Freeway 99 northerly to Audubon Drive.
- addition of high occupancy vehicle (HOV) travel lanes on freeways serving the Fresno-Clovis-Madera urban area.
- identify and pursue measures that enhance the city's ability to obtain or use land for on-site bus turning and parking areas and construct attendant employee and passenger facilities.

G-1-q. Policy: Examine potential sources of revenue to pay for air quality improvement measures. With a nexus study to demonstrate the need for and benefit of this type of program, revenue collected to combat air pollution could be used for the following prioritized air quality-oriented programs:

- computerization/synchronization of the city's traffic signals.
- mass transit improvements and operating subsidy.
- development of alternative modes of transportation such as bike lanes/paths and trails.
- remedial improvement of existing congested intersections and underdeveloped planned city streets.
- the planting of more trees and other landscaping in the city.

Water Resources

G-2. OBJECTIVE: Maintain a comprehensive, long-range water resource management plan that provides for appropriate management of all sources of water available to the planning area and ensures that sufficient and sustainable water supplies of good quality will be economically available to accommodate existing and planned urban development.

G-2-a. Policy: Support cooperative, multi-agency regional water resource planning efforts involving the Cities of Fresno and Clovis, Fresno County, Fresno Metropolitan Flood Control District, the Department of Water Resources, the Regional Water Quality Control Board, irrigation districts, and other agencies and stakeholders in the area.

G-2-b. Policy: Implement the Fresno Metropolitan Water Resources Management Plan, and update this plan as necessary, to ensure cost-effective use of water resources and continued availability of good-quality groundwater and surface water supplies.

G-2-c. Policy: Continue interagency efforts toward completion of a Groundwater Management Plan, pursuant to the provisions added to the California Water Code by Assembly Bill 3030.

G-2-d. Policy: Maintain and expand cooperative multi-agency planning and programs for water conservation.

G-2-e. Policy: The conclusions, recommendations, and mitigation measures of the Metropolitan Water Resource Management Plan and its Environmental Impact Report shall be used to evaluate land use and development project proposals.

G-3. OBJECTIVE: Protect water resources in the area from further degradation in quality.

G-3-a. Policy: Monitor key water pollutants to determine directions and rates of contaminant travel, in order to achieve cost-effective and timely intervention for containment and remediation of contamination, and to indicate which areas may require water treatment to supply acceptable-quality drinking water.

G-3-b. Policy: Continue to participate in interagency committees and task forces (with local, state, and federal representation, as may be needed) to share information, to efficiently utilize financial resources devoted to evaluating water quality problems, and to facilitate cost-effective management of water pollution.

G-3-c. Policy: Support continued efforts to identify and mitigate detriments to surface and ground water quality that may result from stormwater discharge from urbanized areas.

G-3-d. Policy: Continue to implement water system policies that ensure compliance with Federal and State Safe Drinking Water Standards.

G-3-e. Policy: Support and encourage actions of the Regional Water Quality Control Board, the State Environmental Protection Agency, and the local health department to control and prevent water contamination, including leaking underground storage tank and abandoned storage tank abatement programs.

G-3-f. Policy: Continue programs to collect and treat sewage to enhance water quality and reclaim water resources in a manner that protects the Fresno Sole Source Aquifer.

G-3-g. Policy: Restrict urban development in areas that are not served by a wastewater treatment/management system that is capable of preventing the buildup of compounds that would degrade the aquifer. Oppose the development of new sewage disposal facilities either within the planning area or upgradient (north and east) of the planning area, unless the treatment facilities produce effluent that:

- will not degrade the aquifer in the long term.

- will not introduce contaminants into surface water that would negatively affect its potential economic use for drinking water.
- will not deleteriously affect downstream agricultural and urban uses.
- will not degrade sensitive riparian habitat.

G-3-h. Policy: When new development is allowed to be served by on-site septic systems, it shall be conditioned upon recordation of a covenant that provides for eventual connection to the sewer system.

G-3-i. Policy: Continue to protect areas of beneficial natural groundwater recharge by preventing uses which can contaminate soil or groundwater.

G-4. OBJECTIVE: Manage, use, and replenish water resources to maintain a balanced "water budget" in the Fresno area.

G-4-a. Policy: Preserve the city's surface water entitlements to the fullest extent possible and augment surface water supplies as may be necessary.

- Use surface water, as necessary, to balance the aquifer's long-term sustainable yield with projected demand.
- Use surface water, as necessary, to maintain the overall high quality of Fresno's underground reservoir.
- Protect, develop and maintain areas and facilities necessary for groundwater recharge, including in-lieu recharge achieved through use of a surface water treatment plant.
- Promote use of surface water for landscape irrigation when this is practical and beneficial to overall water management objectives.

G-4-b. Policy: In cooperation with other agencies, enhance the recharge of groundwater as may be necessary.

G-4-c. Policy: Address localized groundwater deficiencies and groundwater quality problems that exist or may arise in portions of the planning area.

G-4-d. Policy: Explore methods of using treated and reclaimed wastewater for irrigating crops and landscaping, while ensuring that there will be no negative impacts on groundwater quality.

G-4-e. Policy: The Departments of Public Utilities and Public Works will use available and innovative forecasting methods to determine the demand on water resources posed by urban development, and to determine appropriate facility needs for meeting this demand.

G-4-f. Policy: Adequate and appropriate conditions of approval will be set for each development project proposal to ensure long-term maintenance of adequate clean water resources and to ensure that necessary potable water production and supply facilities are in place to serve the project prior to occupancy.

G-4-g. Policy: Maintain a comprehensive conservation program that reduces per capita water usage in the city's water service area.

- Encourage and support programs that result in decreased water demand such as landscaping standards that require drought-tolerant plants and controls on watering systems.
- Implement "best management practices" as necessary to maintain the city's surface water entitlements.
- Adopt and implement policies for development of artificial lakes.
- Work cooperatively toward effective uniform water conservation measures that would apply throughout the planning area.
- Expand efforts to educate the public about water supply issues and water conservation techniques.

Agricultural Land

G-5. OBJECTIVE: While recognizing that the County of Fresno retains the primary responsibility for agricultural land use policies and the protection and advancement of farming operations, the City of Fresno will support efforts to preserve agricultural land outside of the area planned for urbanization and outside of the city's public service delivery capacity by being responsible in its land use plans, public service delivery plans, and development policies.

G-5-a. Policy: Establish a cooperative research and planning program with the County of Fresno, City of Clovis, and other public agencies to conserve agricultural land resources.

G-5-b. Policy: Plan for the location and intensity of urban development in a manner that efficiently utilizes land area located within the planned urban boundary, including the North and Southeast Growth Areas, while promoting compatibility with agricultural uses located outside of the planned urban area.

G-5-c. Policy: The City of Fresno shall encourage project development proposals that result in the infilling of the existing urban area.

G-5-d. Policy: New urban development should be compact within the constraints of service capability to conserve land resources and forestall conversion of agricultural land by preventing urban sprawl.

G-5-e. Policy: Amend the urban referral and "holding zone" provisions of the 1983 City of Fresno/City of Clovis/Fresno County Joint Resolution on Metropolitan Planning, and negotiate a memorandum of understanding with these adjoining jurisdictions to prevent further development of rural residential development as well as all forms of urban development not consistent with the 2025 General Plan strategies for compact contiguous development within the city general plan boundaries.

G-5-f. Policy: Oppose lot splits and development proposals in unincorporated areas within and outside the city general plan boundary when these proposals would do any of the following:

- make it difficult or infeasible to implement the general plan.
- contribute to the premature conversion of agricultural, open space, or grazing lands; or constitute a detriment to the management of resources and/or facilities important to the metropolitan area (such as air quality, water quantity and quality, traffic circulation, and riparian habitat).

G-5-g. Policy: In the San Joaquin Riverbottom, accommodate agricultural uses that do not stimulate unplanned growth or conversion of designated open space land to urban uses.

G-6. OBJECTIVE: Support existing farming operations and protect them from untimely urbanization.

G-6-a. Policy: Allow for continued agricultural use of vacant land in the city consistent with standards for the protection of the environment, public safety and well-being, and the planned, orderly, and efficient development of the urban area.

G-6-b. Policy: The City of Fresno shall continue to recognize its agricultural preserve contracts (i.e., Williamson Act contracts) and shall promote the enrollment of all prime farmland that remains outside of its anticipated urban growth area. Scenic or resource conservation easements should be explored as another means for protecting farmland.

G-6-c. Policy: Where possible, major streets will be utilized as boundaries between areas designated for urban development and agriculture.

G-6-d. Policy: When land proposed for urban development directly abuts actively farmed land that is under an agricultural preservation contract which has not had an application for cancellation filed, nor a Notice of Nonrenewal, appropriate design features need to be incorporated into the development project to buffer the agriculture/urban interface. Design features should include the following, or equivalent measures, to create an adequate buffer:

- wider building setbacks with fencing.
- designated open space (including but not limited to: densely landscaped strips, full-width multi-use trails or bikeways, on-site flood control, drainage or recharge facilities) and/or boundary streets.

Mineral Resources

Background

Aggregate mineral resources are critical to supporting urban development: all public and private projects utilize this material for roadway paving, structural elements (foundations), and hardscape (sidewalks, curbing, gutters). Because of the demands that will be made on these mineral resources due to projected growth of Fresno's population, and because the city has land use authority over designated mineral resource areas, the general plan contains policies relating to mineral resource land and direction for managing mining and post-mining rehabilitation of the land.

Naturally occurring deposits of aggregate minerals must be of sufficient quality to meet engineering material specifications and must be sufficiently concentrated to justify the investment in an extraction and processing site. High-quality aggregate minerals are required for proper formulation of concrete to attain sufficient strength through the curing process. Existing and ancient riverbeds and streambeds are prime areas to look for such high-quality concrete aggregate materials, which consist of sand, gravel, and certain types of rock.

Lower-quality aggregate materials, used for base rock and asphaltic mixtures, also can be recovered from riparian corridors, but may be available in other areas as well. For instance, surface mining for base rock is common on the alluvial fans of the Coast Range along the western edge of the San Joaquin Valley.

Recycling (re-crushing) of concrete extends the available supply of mineral resources but cannot replace mining as a source of these materials. The primary reason for this is, virgin minerals are needed for formulation of concrete. Once minerals undergo the curing reaction once, they are only suited for lower-quality uses such as base rock or asphalt mixtures. Another reason that recycling cannot replace mining is that, in a growing area such as Fresno, more new durable structures are created each year than are demolished.

Surface mining operations need to locate in areas where these minerals are sufficiently concentrated–where most of the material excavated consists of the desired materials, and where the mineral deposits can be easily accessed (i.e., there is relatively little "overburden" covering the deposits).

Transportation cost is another major factor in determining the economic recovery of these resources. Concrete aggregate material is used in vast quantities, and it is heavy. Mining sites are seldom amenable to rail transport, and large trucks need to be used. Due to the cost of transport, surface mining operations are most economic when they can excavate and process the material as close as possible to its ultimate points of use. This makes it important to locate mining facilities within, and close to, urban areas–but this also creates potential land use and environmental conflicts due to inherent incompatibilities that mining activity has with many urban land uses.

State legislation was enacted to preserve areas for viable mineral extraction activities close to cities, in order to support economic development: the California Surface Mining and Reclamation Act of 1975 (SMARA). This legislation was chaptered into the California Public Resources Code, and its implementing regulations were chaptered into Title 14 of the California Code of Regulations.

SMARA mandates that a "classification/designation" analysis be done to provide information on future mineral resource availability to urban population centers which depend on these resources for construction and growth. The objective of this mapping and quantification process is to ensure that raw material will be available when needed--that this raw material will not become inaccessible for mining as the result of inappropriate land use decisions involving mineral resource areas.

The California Department of Conservation (DOC) Division of Mines and Geology is required to periodically map high-quality concrete aggregate deposits and to compile periodic statistics on the amount of aggregate minerals available, and consumed, within designated Production-Consumption (P-C) Regions located throughout the state and organized around major metropolitan areas.

Most of eastern Fresno County and south-central Madera County are included in the Fresno P-C Region (see Exhibit 11). Two riparian areas in the Fresno P-C Region have been given special Resource Area designation for their concentration of aggregate materials: the upper Kings River and the San Joaquin River. Deposits in these areas are known to be of high quality, may be relatively easily mined, and are close to consumers. Historically, the close availability of these mineral resources has helped to keep construction costs reasonable in the Fresno-Clovis Metropolitan Area.

Information on each P-C Region is periodically compiled by the DOC in the form of reports containing maps, mineral resource data, mineral recovery (mining) activity data, and estimates of future aggregate material consumption and the remaining useful life of an area's resources.

When the DOC sends these reports to cities and counties, the local jurisdictions are required to incorporate the information into their respective general plans. SMARA requires that local jurisdictions use the information for considering development applications on, and adjacent to, significant mineral resource areas, and for making determinations on mining permit applications.

When the previous DOC Report on the Fresno P-C Region was released in 1988, an amendment to the City's 1984 General Plan incorporated information and policy regarding the mineral resource areas in the City's Sphere of Influence (a portion of the San Joaquin Resource Area). In April, 1999, the Department of Conservation published an updated report for this area: DMG Open-File Report 99-02, Mineral Land Classification: Aggregate Materials in the Fresno Production-Consumption Region, California. The information in Open File Report 99-02 is being used to again update the city's General Plan Mineral Resources policies.

Exhibit 10 depicts the most recent DOC mapping of designated mineral resource areas in the San Joaquin River corridor within Fresno's potential planning area. The mineral classification of land can only be changed by the State Geologist, appointed by Division of Mines and Geology. Formal designation of mineral resource zones (MRZs) requires ratification by the appointed State Mining and Geology Board.

The "MRZ-2" designation applies to areas that are demonstrated to have regionally significant deposits of high-grade sand and gravel aggregate (i.e., material suitable for making Portland Cement Concrete). Since roads, mined-out areas, or other land that cannot be mined separates the riparian swath of MRZ-2 land into discrete areas, the DOC further divides and designates this land into numbered sub-areas called "Sectors."

Potential, but presently unproven, mineral resource areas are mapped as MRZ-3. Most of the area outside of the San Joaquin and Kings River Resource Areas has an MRZ-3 designation, and may contain economically recoverable mineral resources. However, those resources may not be of the high quality needed to formulate concrete.

Areas that do not contain, or no longer contain, aggregate mineral resources are mapped as MRZ-1. The MRZ-1 designation is mostly applied to former MRZ-2 areas that have been mined-out, but can also be applied when a geologic investigation reveals that an area has no economically recoverable quantities of aggregate minerals.

Open File Report 99-02 has tracked aggregate mineral resource availability, recovery (through mining activity), and consumption in the Fresno P-C Region since 1960. It predicts future consumption rates, and estimates the useful life of remaining mineral reserves in this region.

Total aggregate resources in the entire Fresno P-C Region are estimated to be 2.2 billion tons, covering some 30 square miles (this reflects no significant net change from DOC's previous 1988 Report). Not all these resources are recoverable, however; because some of the known reserves lie within Designated Floodways and 100-year floodplains of the San Joaquin and Kings Rivers. The 1980 FEMA 100-year floodplain map of the San Joaquin River covered 14 percent to 19 percent of mineral resources. The recent remapping of the San Joaquin River's 100 year floodplain could decrease the amount of mineral resources available for future mining, but the effect of this remapping has not yet been estimated by the Division of Mines and Geology.

The 1999 Report noted that no aggregate mineral reserves underlying designated resource zones in the Fresno P-C Region had been lost to urbanization or other irreversible land uses since the previous report and designation in 1988.

In the Open-File Report 99-02, there were some new areas designated MRZ-2 that had not appeared in the DOC's 1988 Report: 37 acres of MRZ-3 land located on the south side of the San Joaquin River east of the Highway 41 bridge over the river and north of Lanes Road was reclassified to MRZ-2, due to data furnished pursuant to a surface mining permit issued by Fresno County for Al's Concrete (about half of this 37 acres lies south of the Copper Avenue alignment and is, therefore, in the City of Fresno's current Sphere of Influence). Farther east of the Highway 41 bridge on the Madera County side of the river, another 16 acres was classified to MRZ-2 from MRZ-1 in order to correct a previous error in mapping.

On the other hand, significant acreage in the San Joaquin River corridor was redesignated to MRZ-1 because mineral resources have been removed by mining since the 1988 report was completed: some 1,300 acres on both sides of the San Joaquin River between Friant Dam and the Highway 99 bridge have been changed to the MRZ-1 designation for this reason. About 86 acres on the south side of the San Joaquin River was redesignated to MRZ-1 from MRZ-3 because it was determined not to have regionally significant aggregate mineral reserves.

The DOC Report further distinguishes recoverable aggregate mineral resources as those which are accessible because they are held by companies having approved mining permits. Open File Report 99-02 relates that 93 million tons of high-quality reserves are currently accessible for mining by virtue of being covered by mining permits issued by the cities and counties in the Fresno P-C Region.

The average annual per capita consumption rate in the entire Fresno Production-Consumption Region was 6.5 tons for the years 1960 to 1999, a decrease of 0.5 tons since the last DOC Report in 1988. The Division of Mining and Geology attributes the decrease to an economic recession that occurred in the early 1990s. It could also be attributable to changing development patterns, with more people accommodated by less outward expansion of urban infrastructure: between 1984 and 1999, Fresno increased its population by some 24 percent but only increased its incorporated area by some 5 percent.

Even with the recent decrease in its annual per capita consumption, the Fresno P-C Region has a fairly high rate, relative to other major production-consumption regions. This is considered reflective of a high rate of urban development at a relatively low population density. The per capita consumption rate could continue to be relatively high if average development densities and patterns stay the same. It could stabilize at a lower rate if the Fresno P-C Region matures at higher densities or if economic growth slows. It could increase if future population growth in the overall P-C region (incorporated and unincorporated areas) is accommodated at lower densities, if there is a rapid increase in industrial and commercial development, or if stricter air and water quality regulations significantly increase the demand for paving materials.

Based on past consumption patterns in this region and on 1997 State Department of Finance population projections, the DOC estimates that the demand for all types of aggregate mineral resources over the next 50 years within the Fresno P-C Region will total 528 million tons, of which half (264 million tons) needs to be high-quality material suitable for Portland Cement Concrete. That 50-year projected demand figure has doubled since it was last estimated in 1988, probably attributable to the region's rapid population increase during the mid- and late 1980s.

The amount of available aggregate materials diminishes as active producers deplete the deposits, and as land containing suitable sand and gravel deposits is utilized for urban development. If additional reserve areas in the Fresno P-C Region are not covered by new mining permits, the DOC estimates that aggregate material demand in the region will be exceeded by supply in the year 2011 (a 12-year horizon from publication of Open Report 99-02).

In contrast, the DOC's 1988 report on aggregate mineral resources in the Fresno P-C Region estimated that mineral resources under permit would last until year 2010 (a 22-year horizon to depletion). In his preface to Open File Report 99-02, the State Geologist expresses a concern that this shortening of the estimated time depletion of permitted mineral reserves is problematic, especially in light of the long lead time necessary for lead agencies to issue new mining permits.

The California Surface Mining and Reclamation Act and its regulations have been amended several times since 1975, mainly to address additional requirements for rehabilitating (reclaiming) mine sites after cessation of mining. The main feature of SMARA's mine rehabilitation program is the requirement for formal rehabilitation plans, and for the posting of financial assurances to guarantee implementation and completion of this rehabilitation. Mine reclamation plans must address the following issues:

- Establishment of a basic public record regarding the original (pre-mining) condition of a mine site;

- The intended future condition of the mine site after cessation of mineral extraction: the final (end) use of the land (which must be consistent with the General Plan), and the final physical configuration of land, water, vegetation, and structures;

- Coordination of reclamation activities with mining operations; and

- The mineral extraction permittee's commitment for a given reclamation effort, in terms of financial resources and work required for post-reclamation maintenance and monitoring.

SMARA requires that cities and counties with designated mineral resource land adopt, and update, ordinances for mining and reclamation so that these activities are regulated at the local level in a manner consistent with state law and regulations. The City of Fresno last updated its Surface Mining Ordinance in May of 1999, and it was certified (approved) by the State Mining and Geology Board. This updated ordinance expanded the zone districts where mining activity is allowed by allowing mining to be done by conditional use permit within the AE-20/Exclusive Twenty-Acre Agricultural District. Formerly, mining could only be done in the O/Open Conservation District. However, both AE-20 and O Districts were ruled consistent with the city's multi-use open space land use designation in the riverbottom. Therefore, adding surface mining as a conditionally permitted use in the AE-20 District would make it somewhat easier to establish a new mining operation on agriculturally-zoned land in this prime mineral area.

The 1999 Surface Mining Ordinance also updated and clarified state and city requirements for land use decisions affecting mining operations and MRZ-2 areas; the content of mining permit and reclamation plan applications; the city's procedures for processing mining permit applications; and the maintenance of financial security for post-mining reclamation.

Current decisions on preservation and recovery of mineral resources, and on the end use and reclamation of mine sites, will have impacts on future generations who must depend on today's foresight and commitment to the conservation of mineral producing lands and environmental quality.

The following policies are intended to protect high-quality aggregate mineral resources and to minimize long-term adverse environmental impacts from mining activity. The policies address issues such as protection of mineral resources from the encroachment of incompatible uses; management of the urban area/resource area interface to mitigate air, noise, and visual pollution from mineral extraction and processing; and reclamation of mine sites after mineral extraction activities are completed.

It is noted that the following mineral resource management policies were included in the previous draft Fresno 2000 General Plan which was not adopted by the council during hearings conducted in the Fall of 2000. Because the California Public Resources Code and the State Mining and Geology Board (SMGB) mandated that the city's mineral resource management policies be updated by January 2001, the Planning and Development Director initiated Plan Amendment Application No. A-99-35 to update the Resource Conservation Element of the existing 1984 Fresno General Plan. The city council adopted the below listed policies on January 23, 2001.

G-7. OBJECTIVE: Provide for the conservation of, and mineral extraction potential of, aggregate mineral resources within the city's planning area, as identified by the Division of Mines and Geology.

G-7-a. Policy: Update Aggregate Mineral Resource Zones Map (Exhibit 10) when the Department of Conservation notifies the city of amendments in MRZ designations, and apply consistent land use policies and resource protections to emphasize the prime economic importance of the high-quality, close-to-market aggregate resources for meeting future needs of the Fresno Production-Consumption Region.

G-7-b. Policy: The city shall maintain its multi-use open space land use planning designation and shall, through annexation and entitlements, apply zoning consistent with mineral extraction in the entire San Joaquin Riverbottom, including the proposed expanded urban boundary of the North Growth Area shown on the 2025 Fresno General Plan Land Use and Circulation Map (Exhibit 4).

- Allow for, and support, the continuance of multiple open space uses in the San Joaquin Riverbottom such as mineral extraction operations conducted in conformance with the SMARA, the city's Surface Mining Ordinance, and existing conditional use permits that meet SMARA requirements.
- In the San Joaquin riverbottom, accommodate only those mineral processing activities associated and co-located with mining operations when such industrial activities will sunset with the mining operation and do not stimulate unplanned growth or conversion of multi-use open space to urban uses.

G-7-c. Policy: A Mineral Zone ("MZ") overlay zone district shall be created when the city's Zoning Ordinance is revised, to denote lands which need to be protected for mineral resource conservation purposes and to provide for consistent application of conservation policies when land use decisions are made.

- Designated MRZ-2 land within the city's incorporated boundaries shall be assigned MZ overlay zoning.

- All properties in the city with permitted surface mining operations shall be assigned "MZ" overlay zoning, whether or not such properties have been formally designated MRZ-2 by the Department of Conservation.
- Maps and exhibits used for permitting and entitlements on, or abutting these areas shall depict the boundaries of any MZ overlay zoning.

G-7-d. Policy: The city shall prohibit land uses and development projects that preclude mineral extraction in potential high-quality mineral resource areas designated MRZ-2 . A use will be considered incompatible with potential surface mining if it meets any or all of the following criteria:

- it is a land use or involves improvements or activities not designated or provided for in the general plan or current approved entitlements for the site.
- it would create parcels or lots smaller than 20 acres that are not created for the purposes of resolving a state ownership of land or are not created for establishing/augmenting public facilities that are consistent with the general plan.
- it physically or materially obstructs future use of the site for mineral extraction.
- it would create an economic value of land through site improvements such as grading or structures (paid for by public or private investment) that are unrelated to mineral extraction or post-mining reclamation and that would make mineral extraction a financially infeasible use.
- it involves the institution of activities on land that would make mineral extraction a comparatively financially infeasible use.
- any San Joaquin River Parkway facilities developed or approved by the city shall be designed, constructed, and operated in such as way that sand and gravel mining operations are not adversely affected and future mineral extraction will not be precluded in MRZ-2 designated areas.

G-7-e. Policy: Provide appropriate buffering for current and future mineral extraction operations by establishing compatible, nonsensitive land uses adjacent to permitted mining operations and designated MRZ-2 areas, in order to prevent land use conflicts over attractive nuisances, dust, noise, and viewshed impacts.

- The city shall identify permitted surface mining operations in, and adjacent to, its planning area and shall maintain a record of their locations, and the locations of approved haul routes serving these surface mining sites.

- Land bordering, and within a 1/8-mile distance of the following will be considered "potential mineral extraction impact area:" all land that qualifies for the abovementioned "MZ" overlay zoning; all permitted surface mining operations adjacent to the city; and all approved haul routes serving permitted mining operations.
- Maps and exhibits used for permitting and entitlements shall depict any potential mineral extraction impact areas.
- In potential mineral extraction impact areas, the city will not approve land uses that are inherently incompatible with mining and related activity due to sensitivity of these land uses to levels of noise and/or dust that may be associated with mineral extraction and on-site processing.
- Project proposals that might create a conflict with permitted surface mining or future mining activities need to provide on-site mitigation of potential conflicts. Sufficient buffering measures (such as setbacks, walls, and landscaping) shall be required when a potentially incompatible land use is proposed adjacent to permitted mining operations and/or designated MRZ-2 land.

G-8. OBJECTIVE: Permit the cost-effective recovery of available mineral resources while protecting the environment from the potential adverse effects of surface mining operations.

G-8-a. Policy: Conditional use permits shall be submitted for new and modified mineral extraction proposals and processed according to provisions of SMARA and the city's 1999 Surface Mining Ordinance (as it may be required to be updated in the future).

- The California Environmental Quality Act (CEQA) will be used to evaluate potential environmental effects that may be subsequent to, and/or related to, issuance of these conditional use permits.
- Post-mining end uses stated in the conditional use permit must be consistent with the general plan designation and policies applicable to the proposed mine's location. Particular attention should be paid to preserving the San Joaquin River's Designated Floodway, and to ensuring that end uses will not create safety hazards with respect to 100-year flood events.
- The city's adopted operational requirements for surface mining and city standards for reclamation must be addressed and adhered to by the mining permit and reclamation plan. Reclamation plan requirements shall be oriented to protecting sensitive resources.

- Reclamation standards shall permit land owners, including public agencies, a variety of options. It should be recognized that wildlife habitat, scenic, and recreational uses can be compatible with other permitted multi-use open space uses of reclaimed lands in the San Joaquin riverbottom. Whenever feasible, end uses and reclamation plans for mineral extraction sites in the San Joaquin riverbottom should provide for "multiple use" proposals and should support the San Joaquin River Parkway conceptual plan.

G-8-b. Policy: Surface mining permits approved by Fresno County will be honored and administered by the City of Fresno upon annexation, provided that:

- the surface mining permit/entitlement and financial assurance are in compliance with SMARA and other applicable state law.
- the mining operation is in compliance with the terms of its current permits related to mineral extraction and reclamation. In the event of noncompliance, permit expiration, or permit revocation, the city reserves the right to require new permit applications to be processed and to take such measures to ensure compliance as are provided for by law or regulations.

G-8-c. Policy: The city will provide sufficient resources to ensure that required annual compliance inspections and other monitoring activities are done for the surface mining operations and reclamation activity that are subject to the city's SMARA Lead Agency authority.

G-8-d. Policy: The city will ensure that reclamation activities following mineral extraction are timely and beneficial, pursuant to the requirements of SMARA and the city's 1999 Surface Mining Ordinance (as it may be required to be updated in the future). Reclamation guidelines shall be realistic and enforceable, with some flexibility allowed through the revised/amended conditional use permit process, in recognition of the fact that a mineral extraction site may contain unknown resources or difficulties at the time its original mining permit is issued.

G-8-e. Policy The City of Fresno will continue to make efforts to work cooperatively with neighboring jurisdictions having, or potentially having, oversight of mineral resource areas and SMARA lead agency responsibility for mining and reclamation, in order to develop uniform criteria applicable to existing, new, and altered mineral extraction sites in the San Joaquin riverbottom.

Energy Conservation

G-9. OBJECTIVE: Reduce the consumption of non-renewable energy resources by requiring and encouraging conservation measures and the use of alternative energy sources.

G-9-a. Policy: The city shall continue its leadership role in energy conservation through its own facilities and operations.

- The city shall continue its existing beneficial energy conservation programs.
- All new construction and major renovations in municipal buildings shall conform to applicable Title 24 energy standards.

G-9-b. Policy: The city shall periodically consult with utilities and regulatory, and state-level planning agencies to refine service demand estimates and to facilitate area-wide energy distribution.

G-9-c. Policy: Through its regulation of land use planning and development, the city will provide for energy conservation.

- Current energy-efficient planning and construction guidelines will be maintained.
- Environmental review of development projects (including changes in land use designations) will include a description of energy consumption and conservation features that are, or feasibly could be, incorporated into these projects.
- Siting, building orientation, structural design, and landscaping of a proposed land use or development project will be considered in relation to energy efficiency. Energy efficiency will be a factor that is considered in the decision process for projects.
- In regard to the Solar Rights and Solar Shade Acts of 1978, the city shall observe provisions in state law regarding solar access and shall continue to study whether further legislation is necessary.
- At the interface of commercial or industrial and residential land uses, or the interface of multi-family with single-family residential land uses, height restrictions and/or setbacks should be used at the common boundary to ensure solar access to structures on both sides of the boundary.
- Updated information on California Title 24 and other energy conservation guidelines and measures will be made available to staff and the area construction industry.

Historic Resources

G-10. OBJECTIVE: Foster community pride, attract visitors and tourists to distinctive areas, provide recreational opportunities, enhance educational opportunities, and augment the body of scientific and historic knowledge through identification, appropriate recognition, and promotion of historic and cultural resources.

G-10-a. Policy: Establish, and periodically review, the defining criteria that characterize historic resources.

G-10-b. Policy: Historic structures, districts, sites, and landscape features shall be considered as those which:

- represent past eras, events, and persons important in history.
- provide significant examples of architectural styles of the past or are landmarks in the history of architecture.
- are unique and irreplaceable assets to the city and its neighborhoods or provide examples of the physical surroundings in which past generations lived, for this and future generations.
- designated historic districts shall be "living" examples of maintaining quality and continuity of historic resource material and the overall character of the neighborhood.

G-10-c. Policy: Unique prehistoric resource sites shall be considered as those archaeological and paleontological sites which:

- contain information needed to answer important scientific research questions.
- have special quality or unique features, such as being the oldest, largest, or most complete example of a particular type of site or are directly associated with a scientifically recognized prehistoric or historic event or person.

G-10-d. Policy: Utilizing a combination of historic preservation staff, citizen volunteers, and qualified professionals hired with available funds, conduct a survey of the general plan area to create and maintain a computerized database of building/housing stock information within the city's planning area, using an inventory system which includes relevant facts, including year of construction and other historic information as appropriate.

- Historic preservation staff will provide training, guidance, and oversight to assist and encourage citizen volunteers in conducting a first-level survey to identify all candidate historic resources by physical and cultural attributes such as age of the resource, architectural style, neighborhood siting, prominence in local history, and any special features or events associated with it.
- City staff will utilize results of the above survey to prepare grant applications and budget requests for more detailed surveys to determine the nature of potential historical resources indicated by the first level screening. The city will also use available funding and other contributions to conduct detailed surveys.
- Findings of detailed historical resource surveys will be archived in a permanent, retrievable, user-friendly database that is continually updated.
- The city will cooperate with other jurisdictions, agencies, and organizations to collect information on historic and candidate sites.

G-10-e. Policy: Facilitate community awareness of historic and cultural resources and encourage public participation in related programs.

- The city will develop resources to assist and encourage citizen participation in the implementation of historic preservation policies and programs.
- Develop a district-oriented approach for promoting the historic heritage of Fresno neighborhoods. Sponsor and assist in the development of "walking tours," portable multi-media presentations, brochures, and newsletters to promote Fresno's historic values and these areas' private and public preservation efforts.
- Promote and participate in federal, state, local, and privately sponsored grants, demonstration programs, and projects that are directed toward historic structure revitalization and modern-day adaptive reuses (such as the National Trust for Historic Preservation's "Main Street Program").
- Enlarge the role of the Historic Preservation Commission in advising the city council, other legislative bodies, and the general public on the wide range of historic preservation issues.
- Coordinate with Caltrans, the State Office of Historic Preservation, the Convention and Visitors Bureau, Historical Society, Chamber of Commerce, Downtown Association, public utilities (such as railroad companies) and other agencies and interested parties to determine needs, design alternatives, and funding strategies for visitor information and entryway treatments that would encourage people to enjoy Fresno's historical and cultural features.

G-11. OBJECTIVE: Safeguard Fresno's heritage by preserving resources which reflect important cultural, social, economic, and architectural features so that community residents will have a foundation upon which to measure and direct physical change.

G-11-a. Policy: Continue and expand the city's comprehensive historic preservation program, as set forth in this Historic Resources component of the general plan.

G-11-b. Policy: The Historic Preservation Commission shall take a lead role in the following historic preservation activities:

- surveying, identifying, and recommending approval of the designation of historic resources, including conservation and heritage districts.
- making annual budget cycle funding requests to city, county, state, and federal agencies, and to private foundations and nonprofit public corporations and prioritizing which historic conservation projects should receive available city-administered funding for implementation of historic preservation objectives.

- appropriately staff the city historic preservation program to implement the city's historic preservation policies and programs.
- programs aimed at neighborhood improvement, including nuisance abatement, shall complement the preservation of cultural resources.
- increase cooperative efforts with the Fresno County Historic Landmarks and Records Advisory Commission.

G-11-c. Policy: Implement and broaden the resource conservation program as set forth by the Preservation of Historic Structures Ordinance.

- Perpetuate, protect, enhance, and revitalize historic resources.
- Encourage adaptive current uses of historic resources, while preserving their unique features.
- Zoning, building, fire, health, housing, landscape/xeriscape, and other related codes shall be liberally construed, and amended if necessary, to provide for a more supportive regulatory structure to assist in historic preservation objectives, while maintaining the essential level of protection for health and safety.
- Encourage the use of, and educate city staff on the use of, the State Historic Building Code. This code shall be used to guide plan checking and inspections in structures that have been recognized by the Historic Preservation Commission as qualified under the Historic Building Code.
- Before the issuance of a formal demolition order by the city involving structures over fifty (50) years old, potential Local Register listing shall be reviewed by historic preservation staff, and, if necessary, referred to the Historic Preservation Commission. This shall be subject to staffing levels and amendment of the city's Historic Preservation Ordinance.
- Before any nonemergency removal of historic trees or landscape elements, the City Historic Preservation Commission shall be given an opportunity to review the proposed action and make a recommendation as to potential alternative actions.
- Prior to demolition, the city shall offer for sale all city-owned relocatable Local Register, National Register, or State Landmark structures acquired within public project boundaries to buyers prepared to relocate the structures. All such structures shall be offered for sale a minimum of 180 days. Preference will be given to buyers intending to relocate these structures to parcels in designated city historic districts.

- The Historic Preservation Commission may recommend to the city council that the city be the "purchaser of last resort" to acquire endangered structures that are on the Local or National Historic Register, or are State Historic Landmarks, and relocate them to other locations in historic districts. The commission and council shall establish criteria to prioritize the acquisition of endangered historic structures based upon economic feasibility for each individual project and the need to balance such commitments of financial resources so that an acquisition does not materially detract from accomplishing other priority projects which require public historic preservation funding.

G-11-d. Policy: Prehistoric resources (those containing archaeological and paleontological material) shall be protected.

- In any public or private project, it shall be a condition of project permits that work stop immediately in the immediate vicinity of the find if archaeological and/or nonhuman fossil material is encountered on the project site.
- If there are suspected human remains, the Fresno County Coroner shall be immediately contacted. If the remains or other archaeological materials are possibly Native American in origin, the Native American Heritage Commission shall be immediately contacted, and the California Archeological Inventory's Southern San Joaquin Valley Information Center shall be contacted to obtain a referral list of recognized archaeologists.
- An archaeological assessment shall be conducted for the project if prehistoric human relics are found that were not previously assessed during the environmental assessment for the project. The site shall be formally recorded, and archaeologists' recommendations shall be made to the city on further site investigation or site avoidance/ preservation measures.
- If nonhuman fossils are uncovered, the Museum of Paleontology at U.C. Berkeley shall be contacted to obtain a referral list of recognized paleontologists. If the paleontologist determines the material to be significant, it shall be preserved.

G-11-e. Policy: If the site of a proposed development or public works project is found to contain unique prehistoric (archaeological or paleontological) resources, and it can be demonstrated that the project will cause damage to these resources, reasonable efforts shall be made to permit any or all of the resource to be scientifically removed, or it shall be preserved in situ (left in an undisturbed state). In situ preservation may include the following options, or equivalent measures:

- amending construction plans to avoid prehistoric resources.
- setting aside sites containing these resources by deeding them into permanent conservation easements.

- capping or covering these resources with a protective layer of soil before building on the sites.
- incorporating parks, green space, or other open space in the project to leave prehistoric sites undisturbed and to provide a protective cover over them.
- in order to protect prehistoric resources from vandalism or theft, their location shall not be publicly disclosed until or unless the site is adequately protected.

G-11- f. Policy: Establish historic districts to recognize and protect areas with significant architectural and historic resources, including supporting districts. Develop strategies and plans for restoration, rehabilitation, and enhancement of historic and supporting districts, to ensure their preservation and to provide an integrated program for compatible development within these neighborhoods.

- Encourage the preservation and rehabilitation of historic resources as design themes in historic neighborhoods.
- Develop and implement "Historic/Heritage District Streets" policies in City Streetscape Master Plans.
- Adopt and maintain a list of designated Historic Streets, and depict these streets in the circulation elements of specific and community plans.
- Seek funding for installing, replacing, and repairing needed public facilities and street furniture which would enhance historic districts. Visible improvements, including landscaping, shall support the representative era of historic districts and their architectural themes.
- Provide protection for, and routine maintenance of, character-defining streetscape and landscape elements in historic districts.
- Save historically or architecturally significant structures by using available infill sites in historic districts. Preference shall be given to selling or using such city-owned sites for relocating privately-owned and publicly-owned historic structures.
- When evaluating subdivision applications and land use entitlements in historic districts, longstanding precedents for lot size and land uses (including mixed patterns of land use) shall be considered.
- Require compatible design when infill development or construction occurs in historically significant areas.
- Identify, promote, and participate in federal- and/or state-sponsored demonstration projects, such as the "Main Street Program" sponsored by the National Trust for Historic Preservation.
- Encourage the use of a "Historic Facade Easements" program.

G-11-g. Policy: Achieve historic resource conservation goals through other community plans and programs.

- Integrate historic preservation into new development and redevelopment projects. Identify candidate and recognized historic resources in the early stages of plan preparation and policy development by coordinating historic preservation survey research with policies and design strategies (including landscaping and streetscape themes).
- Redevelopment areas shall be screened for possible historic resources which would be adversely affected by the redevelopment proposal. More detailed assessments shall be done on register candidate properties, and recommendations for the treatment of those properties shall be forwarded through the Historic Preservation Commission to redevelopment planning staff.
- Interdepartmental review procedures shall continue to ensure that preservation policies are respected in community decision-making. When proposals may affect historic resources, land use plans, development projects, capital improvement programs and public services delivery, plans shall be reviewed by the Historic Preservation Commission for comment on their compatibility with historic resources and preservation goals.
- When proposed plans, projects, policies, or programs conflict with historic preservation objectives, the Historic Preservation Commission's recommendations on resolving the conflict shall be considered by staff, planning commission, and the city council.
- Uphold historic preservation policies included in all approved city land use plans.

G-11-h. Policy: Assist in, or develop, new complementary and cooperative programs, both public and private, to promote the preservation of historic and cultural resources.

- Prepare National Historic Register applications for city-owned properties as appropriate.
- Maintain Fresno's Certified Local Government status under the state-administered program.
- Explore the feasibility of attaining Mills Act eligibility for qualifying Fresno sites.
- Host workshops and make information available to assist property owners in researching and preparing Local Register, California Landmark, and/or National Historic Register applications.
- Prepare and publish manuals to address appropriate and inappropriate types of modifications to historic buildings and to public areas in historic districts.
- Encourage the County of Fresno and other local jurisdictions to adopt complementary resolutions and ordinances to support historic preservation.

G-11-i. Policy: Develop methods to facilitate private ownership and upkeep of historic resources and to encourage private reinvestment in historic preservation.

- Assist the private sector in the development and promotion of programs to support the acquisition and rehabilitation of historic resources.
- Develop incentives and zoning bonus programs as methods to encourage the preservation of historic resources.
- Examine various financing strategies and public funding opportunities for use in the preservation and rehabilitation of historic resources.
- Establish, if feasible, monetary incentives (such as fee reductions, grants, and low-interest loan programs) for restoration or rehabilitation of historic resources.
- If feasible, implement tax incentives for the restoration and maintenance of historic resources.

Native Plants and Wildlife

G-12. OBJECTIVE: To provide for long-term preservation, enhancement, and enjoyment of plant, wildlife, and aquatic habitat resources in the Fresno area by protecting, improving, and restoring these resources.

G-12-a. Policy: Support state, federal, and local programs to acquire significant habitat areas in and near Fresno for permanent protection and/or conjunctive educational and recreational use.

G-12-b. Policy: The City of Fresno will participate in cooperative, multi-jurisdictional approaches (involving the Counties of Fresno and Madera, the City of Clovis, the San Joaquin River Conservancy, the Metropolitan Flood Control District, and other agencies and organizations) for area-wide habitat conservation plans to preserve and protect rare, threatened, and endangered species that could be adversely affected by continued population growth and development.

G-12-c. Policy: In development projects, consider the incorporation of natural features (such as ponds to be designed and managed for habitat values, or hedgerows and wooded strips) such that these features can serve as a buffer for adjacent natural areas and/or an enhancement to the ecological values of Fresno.

G-12-d. Policy: Projects that could adversely affect rare, threatened, or endangered wildlife and vegetative species (or may have impacts on wildlife, fish, and vegetation restoration programs) may be approved only when findings are made by the California Department of Fish and Game (and the U.S. Fish and Wildlife Service, as appropriate) that adequate mitigation measures are incorporated in the project's design.

G-12-e. Policy: Open Space land use designations, appropriate zoning, setbacks, and conservation easements will be used to preserve areas identified as sensitive or critical habitat for rare, threatened, or endangered vegetation and wildlife species, with particular attention paid to the North and Southeast Growth Areas and to the preparation of the required community and/or specific plans for these expansion areas of the proposed 2025 Fresno General Plan.

G-12-f. Policy: If the California Department of Fish and Game or federal conservation agencies require habitat replacement as a condition of, or mitigation for, any development project in Fresno's planning area, such replacement or mitigation habitat should be located, if possible, within or near the Fresno-Clovis Metropolitan Area.

G-12-g. Policy: Mitigation programs involving restoration of natural habitats shall include measures needed to create functional, sustainable wildlife habitat. Specific components of these programs will include:

- an evaluation of the site's pre-project environmental setting and the proposed design and operating parameters of the mitigation measures, to be evaluated in the project's CEQA/NEPA environmental review processes.
- a graphic depiction of land to be acquired or set aside for mitigation activities.
- permitting required by local, state, and federal agencies for the project.
- mitigation site preparation plans.
- specification of the types and sources of plant material used for any revegetation.
- water supply and distribution for plants and wildlife.
- post-planting maintenance and other operational measures to ensure successful mitigation.
- monitoring at an appropriate frequency by qualified personnel and reporting of data collected during monitoring to permitting agencies.

G-12-h. Policy: Establish, in consultation with appropriate public agencies with special expertise, development and operational standards that may be needed to supplement existing law and regulations to avoid or reduce any adverse impacts of development adjacent to important habitat areas. Standards could include such measures as controls on noise and glare, or restrictions on disturbance of vegetated areas.

G-12-i. Policy: For drainage and flood detention basins in agricultural or industrial areas, and for those basins where design or other factors preclude developed recreational uses, Fresno Metropolitan Flood Control District and the City of Fresno will consider development of public or private fisheries and habitat areas for native plants and wildlife, in consultation with the state Department of Fish and Game.

G-12-j. Policy: Where appropriate in flood zones along water courses and flood detention basins, pursue development of conjunctive habitat and recreational trail uses in flood control and drainage projects.

G-12-k. Policy: Encourage property owners to reestablish, maintain, and protect continuous wildlife corridors along riparian areas, by use of building setbacks and the planting of suitable native vegetation along the riverbanks and bluffs, streambanks, drainage or irrigation ditches, and, where appropriate, fence lines.

G-12-l. Policy: Coordinate habitat restoration programs with federal, state, and local flood control and natural resource agencies, to achieve useful restoration and take advantage of the opportunity for a coordinated regional mitigation program, while avoiding flood control problems and the undesirable introduction of non-native plant and animal species.

G-13. OBJECTIVE: Maintain and restore, where feasible, the ecological values of the San Joaquin River corridor, because (1) this area is Fresno's main scenic feature and natural area; (2) it is important for maintenance of good-quality water resources in the region; and (3) it constitutes unique, irreplaceable habitat for valley native species.

G-13-a. Policy: Adopted plans, codes/ordinances, regulations, and policies of the city will continue to indicate strong concern for, and protection of, the San Joaquin River bluffs and the riverbottom, to promote Fresno's scenic amenities and protect the river's water quality, fisheries, and associated riparian environment.

G-13-b. Policy: Support Fresno County General Plan policies which promote the preservation and enhancement of natural resources in Fresno County's river influence areas.

G-13-c. Policy: Apply, and continue to honor, the open space land use designation in the entire San Joaquin riverbottom and bluffs when considering land use decisions in the vicinity of the river. Ensure that development projects in the vicinity of the river corridor protect and compliment its habitats and natural settings, including development within the proposed North Growth Area of the 2025 Fresno General Plan.

G-13-d. Policy: Implement the multi-use open space land use designation through the following actions:

- apply "O"/Open Conservation District or "AE-20"/Exclusive Twenty-Acre Agricultural District zoning when land use plans, rezonings and annexations are proposed for land on the San Joaquin River bluffs and riverbottom.

- continue to prohibit new residential land use entitlements (zoning, special permits, and subdivisions) in the riverbottom, pursuant to the multi-use open space land use designation and zoning districts adopted for the area.
- require a finding of plan consistency for all land use entitlements (including land divisions and all types of special permits) and all infrastructure projects in the river corridor.
- prohibit the location of any solid waste facilities of any type (including transfer and waste material recovery stations) in the riverbottom.
- adjacent to the river corridor, incorporate natural topography with respect to the design and siting of all physical improvements, in order to minimize grading and disturbances of the viewshed.
- complete studies addressing the limitations of the area's biotic community and hydrologic status prior to the approval of any project which involves land in, or immediately abutting, the San Joaquin riverbottom.
- carefully plan and regulate outdoor lighting visible in, and from, the river corridor. In instances where such lighting is necessary, it shall be of the lowest feasible intensity and directed away from, or shielded from, the reserve or corridor. Adverse impacts of lighting will be further mitigated by planting tall vegetation for screening between light sources and wildlife corridors/reserves.

G-13-e. Policy: Support efforts to identify and mitigate cumulative adverse effects on aquatic life from stormwater discharge to the San Joaquin River.

- Discharge of runoff from industrial and commercial land uses to the San Joaquin River or other riparian corridors shall be avoided.
- Development entitlements for sites which have drainage (directly or indirectly) to the San Joaquin River or other riparian areas shall be conditioned upon adequate measures for preventing pollution of natural bodies of water from their runoff.
- Water quality and sediments shall be frequently monitored near drainage outfalls to riparian areas.
- If unacceptable levels of contaminant(s) occur, remedial measures shall be promptly instituted.

G-14. OBJECTIVE: Support the San Joaquin River Conservancy in its efforts to develop a river parkway that strikes an appropriate balance between facilitating recreational pursuits; protecting water resources; meeting economic and development needs through sand and gravel production; and long-term preservation, enhancement, and public enjoyment of the river's unique and irreplaceable plant, wildlife, and aquatic resources.

G-14-a. Policy: Encourage natural reserve areas and a wildlife corridor in the riverbottom to protect, enhance, and restore riparian and aquatic habitats, adjacent wetlands, and upland areas integral to the life cycle of river wildlife.

G-14-b. Policy: Natural reserves and wildlife corridors need to be acquired and expanded through purchase, easements, mitigation for proposed activities, or other mutually satisfactory transactions.

G-14-c. Policy: Natural reserves should be sited where highest-quality habitat exists adjoining the river's wildlife corridor and in such other locations where endangered, threatened, or rare species are established or are being reestablished.

G-14-d. Policy: The San Joaquin River's wildlife corridor is to provide continuous land and water areas parallel to the river.

- A minimum width of 200 feet of riparian vegetation should be preserved on both sides of the river. The corridor should be wider when possible and/or necessary to protect additional areas of native plants and critical habitat (such as wildlife breeding areas). In areas where 200 feet of riparian vegetation no longer exists along the river bank, a 200-foot or wider band of native plants is recommended to be reestablished, to the maximum extent feasible from topologic and hydrologic standpoints. Consider exceptions where the minimum-width corridor is infeasible due to topography, hydrology, or other constraints. In those instances, an offsetting expansion is recommended on the opposite side of the river. Where steep bluffs drop directly into or close to the river, incorporate the bluff face into the wildlife corridor.

G-14-e. Policy: Routine monitoring shall be done to determine the status of conditions and mitigation measures required for projects within, and in the vicinity of, the river corridor.

- A memorandum of understanding or other agreement should be implemented so that the San Joaquin River Conservancy can perform, or participate in, this monitoring program in order to furnish additional expertise, provide for cost efficiency, and to ensure consistency throughout the river corridor.
- Based on information obtained from monitoring, modifications in special permits, reclamation plans, and other documents, operating parameters for uses may be necessary to insure human health and safety and the well-being of riparian plants and wildlife.

G-14-f. Policy: As specified in the San Joaquin River Parkway Master Plan and EIR (1997), natural reserve areas and the wildlife corridor areas would be protected whenever more intensive human uses exist or are proposed on adjacent lands. Buffer zones would allow multiple uses on parts of the parkway while still protecting wildlife and native plants.

- Any studies done to determine appropriate buffer widths, along with the conclusions and recommendations drawn from the studies, shall be performed by, or be reviewed and approved by, state and federal wildlife agencies before variances from standard buffer zone widths can be granted.
- The vegetation and permitted uses of the buffer zones need to be tailored to the adjacent habitat it is designed to protect. Natural riparian buffer zones should be maintained, rehabilitated, or reestablished with appropriate native plants (seed material and cuttings locally derived).
- Open space uses such as pasture, low-intensity agricultural activities, and the "rough" or marginal areas of golf courses, may be incorporated into buffer zones when they constitute an improvement in habitat over a previous use or degraded area. However, the potential impacts of construction, cultural, and operational practices (such as grading, number of livestock per acre, lighting, and use of pesticides, herbicides, and fertilizers) need to be thoroughly evaluated and addressed before these uses can be used for buffering.

H. NOISE ELEMENT

Challenges

Noise is generally defined as "unwanted sound," which is a subjective determination of measurable physical phenomena. Ambient noise levels are a major determinant of "quality of life." Noise levels not only affect the utility and enjoyability of property, they affect property values and they affect human health. Scientific studies have repeatedly shown that exposure to elevated noise levels is a subtle stressor, leading to elevated blood pressure as well as permanent loss of hearing sensitivity. Control of noise is an important consideration for the planning process. California Government Code Section 65302(f) requires that general plans contain a Noise Element to identify and quantify potential noise problems and to provide effective policies for noise control and mitigation.

Direction

Sound is measured in decibels (dB). For most purposes, sound is measured in the "A scale," the range of frequencies audible to humans, expressed as dB_A. The decibel scale is logarithmic, which means that for every 5 dB_A increase the perceived level of sound doubles. A 50 percent increase in perceived noise would result in only a 2 or 3 dB_A increase. Depending on its level of intensity, a noise may range from almost inaudible (45 dB_A, the approximate loudness of loud whispering), up to actually painful (140 dB_A, the approximate loudness which can cause physical pain and ear damage).